CITY OF LINCOLN
COUNTY OF LANCASTER
Vince M. Mejer
Purchasing Agent
402) 441-7410 FAX: (402) 441-6513
purchasing@lincoln.ne.gov

QUOTATION REQUEST

Quote Prices F.O.B. Destination
Lincoln, Nebraska

Date -	2/01/07
Order No.-	1850 OQ
Date Due -	02/08/07

QUOTATIONS MUST BE RECEIVED IN THE PURCHASING DIVISION OFFICE BY THE DUE DATE SPECIFIED ABOVE

PLEASE MAKE NECESSARY VENDOR INFORMATION CORRECTIONS ON THIS FORM:

VENDOR INFORMATION

Return Quotation Request To:

Purchasing Division
K-Street Complex
440 S 8th St Ste 200
Lincoln NE 68508
Walla, Bob

Buyer

Item Number / Description	Quantity	UM	Unit Price	Total Price
7207345 Pump, Submersible	2	EA	_____	_____

Dry Pit Submersible Wastewater Non-Clog Pumps

Mfg _____ No. _____

See attached specs and delivery information!
Price must include delivery.

Please fax your quotation back to us by 4:30 p.m. on the above referenced date. Fax to attention of Shelly Hinze at 402/441-6513.

VENDOR MUST COMPLETE THE FOLLOWING

The undersigned represents and warrants that he/she has full and complete authority to submit this quotation and to enter into a contract upon acceptance by the City/County. The undersigned agrees to comply with all conditions above and on reverse side of this document.

COMPANY NAME .....
ADDRESS .....
.....
TELEPHONE .....
FAX .....
EMAIL ADDRESS .....

BY (PRINT NAME) .....
SIGNATURE .....
TITLE .....
DATE .....
DELIVERY SCHEDULE .....
DAYS ARO

Specifications
For
Dry Pit Submersible Wastewater Non-Clog Pumps
Lincoln Wastewater System

1.0 General

1.1 Supplier shall furnish two (2) heavy duty, dry pit, non-clog, submersible wastewater pumps as per the requirements and specifications described herein.

1.2 Pumps shall be supplied without suction elbows and stands.

1.3 Acceptable manufacturer shall be ITT Flygt, Model NT 3102.181

2.0 Pump Operating Requirements and Conditions

2.1 Each submersible pump shall be sized by the manufacturer for a flow rate of 350 GPM @ 18.0 TDH.

2.2 Each pump shall be equipped with an 3.7 HP submersible electric motor as per the specifications described under that section for operation on 460 volts, 3 phase, 60 hertz, 4 wire service.

2.3 Each pump/motor shall be equipped with 50 feet of submersible cable (SUBCAB) suitable for submersible pump applications.

2.3.1 The power cable shall be sized according to NEC and ICEA standards and have P-MSHA Approval.

3.0 Pump Design and Construction

3.1 Major pump components shall be of grey cast iron, ASTM A-48, Class 35B, with smooth surfaces devoid of blow holes or other irregularities.

3.2 All exposed nuts or bolts shall be AISI type 304 stainless steel construction.

3.3 All metal surfaces coming into contact with the pumpage, other than stainless steel or brass, shall be protected by a factory applied spray coating of acrylic dispersion zinc phosphate primer with a polyester resin paint finish on the exterior of the pump.

3.4 Sealing design shall incorporate metal-to-metal contact between machined surfaces.

3.5 Critical mating surfaces where watertight sealing is required shall be machined and fitted with Nitrile or Viton rubber O-rings.

3.6 Fittings will be the result of controlled compression of rubber O-rings in two planes and O-ring contact of four sides without the requirement of a specific torque limit.

3.7 Rectangular cross sectioned gaskets requiring specific torque limits to achieve compression shall not be considered as adequate or equal.

3.8 No secondary sealing compounds, elliptical O-rings, grease or other devices shall be used.

4.0 Cooling System

4.1 Motors shall be sufficiently cooled by the surrounding environment or pumped media and shall not require a water jacket.

5.0 Cable Entry Seal

5.1 The cable entry seal design shall preclude specific torque requirements to insure a watertight and submersible seal.

5.2 The cable entry shall consist of a single cylindrical elastomer grommet, flanked by washers, all having a close tolerance fit against the cable outside diameter and the entry inside diameter and compressed by the body containing a strain relief function, separate from the function of sealing the cable.

5.2.1 The assembly shall provide ease of changing the cable when necessary using the same entry seal.

5.3 The cable entry junction chamber and motor shall be separated by a stator lead sealing gland or terminal board, which shall isolate the interior from foreign material gaining access through the pump top.

5.3.1 Epoxies, silicones, or other secondary sealing systems shall not be considered acceptable.

6.0 Motor

6.1 The pump motor shall be a NEMA B design, induction type with a squirrel cage rotor, shell type design, housed in an air filled, watertight chamber.

6.2 The stator windings shall be insulated with moisture resistant Class H insulation rated for 180°C (356°F).

6.3 The stator shall be insulated by the trickle impregnation method using Class H monomer-free polyester resin resulting in a winding fill factor of at least 95%.

6.4 The stator shall be heat-shrink fitted into the cast iron stator housing.

6.5 The use of multiple step dip and bake-type stator insulation process is not acceptable.

6.6 The use of bolts, pins or other fastening devices requiring penetration of the stator housing is not acceptable.

6.7 The motor shall be designed for continuous duty handling pumped media of 40°C (104°F) and capable of up to 15 evenly spaced starts per hour.

6.8 The rotor bars and short circuit rings shall be made of cast aluminum.

6.9 Thermal switches set to open at 125°C (260°F) shall be embedded in the stator lead coils to monitor the temperature of each phase winding.

6.9.1 These thermal switches shall be used in conjunction with and supplemental to external motor overload protection and shall be connected to the control panel.

6.10 The junction chamber containing the terminal board, shall be hermetically sealed from the motor by an elastomer compression seal.

6.11 Connection between the cable conductors and stator leads shall be made with threaded compression type binding posts permanently affixed to a terminal board.

6.12 The motor and the pump shall be produced by the same manufacturer.

6.13 The combined service factor (combined effect of voltage, frequency and specific gravity) shall be a minimum of 1.15.

6.14 The motor shall have a voltage tolerance of plus or minus 10%.

6.15 The motor shall be designed for operation up to 40°C (104°F) ambient and with a temperature rise not to exceed 80°C.

6.16 A performance chart shall be provided showing curves for torque, current, power factor, input/output kW and efficiency.

6.16.1 Performance chart shall also include data on starting and no-load characteristics.

7.0 Power Cable

7.1 The power cable shall be sized according to the NEC and ICEA standards and shall be of sufficient length to reach the junction box without the need of any splices.

7.2 The outer jacket of the cable shall be oil resistant chloroprene rubber.

7.3 The motor and cable shall be capable of continuous submergence underwater without loss of watertight integrity to a depth of 65 feet.

8.0 Bearings

8.1 Motor bearings shall be permanently grease lubricated.

8.2 The upper bearing shall be a single deep groove ball bearing.

8.3 The lower bearing shall be a two row angular contact bearing to compensate for axial thrust and radial forces.

8.3.1 Single row lower bearings are not acceptable.

9.0 Mechanical Seal

9.1 Each pump shall be provided with a tandem mechanical shaft seal system consisting of two totally independent seal assemblies.

9.2 The seals shall operate in an lubricant reservoir that hydrodynamically lubricates the lapped seal faces at a constant rate.

9.3 The lower, primary seal unit, located between the pump and the lubricant chamber, shall contain one stationary and one positively driven rotating, corrosion resistant tungsten-carbide ring.

9.4 The upper, secondary seal unit, located between the lubricant chamber and the motor housing, shall contain one stationary and one positively driven rotating, corrosion resistant tungsten-carbide seal ring.

9.5 Each seal interface shall be held in contact by its own spring system. The seals shall require neither maintenance nor adjustment nor depend on direction of rotation for sealing.

9.6 Each pump shall be provided with an lubricant chamber for the shaft sealing system.

9.7 The lubricant chamber shall be designed to prevent overfilling and to provide lubricant expansion capacity.

9.8 The drain and inspection plug, with positive anti-leak seal shall be easily accessible from the outside.

9.9 The seal system shall not rely upon the pumped media for lubrication.

9.9.1 The motor shall be able to operate dry without damage while pumping under load.

9.10 Seal lubricant shall be FDA Approved, nontoxic.

10.0 Pump Shaft

10.1 Pump and motor shaft shall be the same unit.

10.2 The pump shaft is an extension of the motor shaft.

10.3 Shaft shall be AISI type 431 stainless steel.

10.4 Pump couplings shall not be acceptable.

11.0 N Pump Impeller

11.1 The impeller(s) shall be of gray cast iron, Class 35B, dynamically balanced, semi-open, multi-vane, back-swept, non-clog design.

11.2 The impeller vane leading edges shall be mechanically self-cleaned upon each rotation as they pass across a spiral groove located on the volute suction which shall keep them clear of debris, maintaining an unobstructed leading edge.

11.3 The impeller(s) vanes shall have screw-shaped leading edges that are hardened to Rc 45 and shall be capable of handling solids, fibrous materials, heavy sludge and other matter found in waste water.

11.4 The screw shape of the impeller inlet shall provide an inducing effect for the handling of sludge and rag-laden wastewater.

11.5 Impellers shall be locked to the shaft and shall be coated with alkyd resin primer.

12.0 Protection

12.1 All stators shall incorporate thermal switches in series to monitor the temperature of each phase winding.

12.2 The thermal switches shall open at 125°C (260°F), stop the motor and activate an alarm.

12.3 Each pump shall be equipped with a (FLS) Float Leakage Sensor to detect water in the stator chamber.

12.4 The Float Leakage Sensor (FLS) when activated, shall stop the motor and send an alarm both local and/or remote.

12.5 The thermal switches and FLS shall be connected to a Mini CAS (Control and Status) monitoring unit mounted in the control panel.

13.0 Testing

13.1 Testing of each pump shall be performed and include the following inspections:

13.1.1 Impeller, motor rating and electrical connections shall be checked for compliance with this specification.

13.1.2 Prior to submergence, each pump shall be run dry to establish correct rotation.

13.1.3 Each pump shall be run submerged in water.

13.1.4 Motor and cable insulation shall be tested for moisture content or insulation defects.

13.2 A written quality assurance record confirming the above testing/inspections shall be supplied with each pump at the time of shipment.

14.0 Start-Up Service

14.1 The equipment manufacturer shall furnish the services of a qualified factory trained field service engineer for 8-hour working day(s) at the site to inspect the installation and instruct the owner's personnel on the operation and maintenance of the pumping units.

14.2 After the pumps have been completely installed and wired, the following startup services shall be performed:

14.2.1 Megger stator and power cables.

14.2.2 Check seal lubrication.

14.2.3 Check for proper rotation.

14.2.4 Check power supply voltage.

14.2.5 Measure motor operating load and no load current.

14.2.6 Check level control operation and sequence.

14.3 During this initial inspection, the manufacturer's service representative shall review recommended operation and maintenance procedures with the owner's personnel.

15.0 Warranty

15.1 Five (5) year 10,000 hour manufacturers warranty.

15.2 The warranty shall be in printed form and previously published as the manufacturer's standard warranty for all similar units manufactured.

16.0 Operation and Maintenance Information

16.1 Three (3) sets of O&M manuals specific to the pump model supplied shall accompany delivery of the equipment.

16.2 O&M manual information shall consist of general operating instruction, recommended spare parts, recommended maintenance, trouble shooting guides, and exploded part assembly views specific to the pump model supplied.

16.3 Supplier shall supply a manufacturers pump performance curve specific to the pump model supplied.

17.0 Delivery Information

17.2 Shipping address is as follows: City of Lincoln, Northeast Wastewater Treatment Facility, 7000 North 70th Street, Lincoln, Ne. 68507

PURCHASING DIVISION
CITY OF LINCOLN AND LANCASTER COUNTY, NEBRASKA
INSTRUCTIONS TO BIDDERS

1. **BIDDING PROCEDURE** - A bid by a corporation must be signed in the name of such organization by a duly authorized official thereof. Any person signing a bid for a firm, corporation, or other organization must show evidence of his authority so to bind such firm, corporation, or organization. Most departments of the City of Lincoln and Lancaster County agencies are exempt from federal excise taxes and state and local sales and use taxes. Kindly bid without taxes. The City/County will be responsible for paying any taxes which may be due.

2. **FAIR EMPLOYMENT PRACTICES** - Each bidder agrees that he/she will not discriminate against any employee or applicant for employment because of age, race, color, religion, ancestry, national origin, disability, sex or marital status, and that he will take affirmative action to assure that applicants are employed and that employees are treated during employment without regard to age, race, color religion, ancestry, national origin, disability, sex or marital status.

3. **DATA PRIVACY** - Bidder agrees to abide by all applicable State and Federal laws and regulations concerning the handling and disclosure of private and confidential information concerning individuals and corporations as to inventions, patents and patent rights. The bidder agrees to hold the City/County harmless from any claims resulting from the bidder's unlawful disclosure or use of private or confidential information.

4. **INDEPENDENT PRICE DETERMINATION** - By signing and submitting this bid, the bidder certifies that: The prices in this bid have been arrived at independently, without consultation, communication or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor.

5. **CLARIFICATION OF SPECIFICATION DOCUMENTS** - Bidders shall promptly notify the Purchasing Agent of any ambiguity, inconsistency or error which they may discover upon examination of the specification documents. Interpretations, corrections and changes made to the specification documents will be made by written addenda. Oral interpretations or changes to the Specification Documents made in any other manner, will not be binding on the City/County; and bidders shall not rely upon such interpretations or changes. No addendum will be issued later than forty-eight (48) hours prior to the date and time for receipt of bids, except: An addendum withdrawing or postponing the invitation to bid.

6. **BRAND NAMES** - If and wherever in the material specifications or proposal form brand names, make, manufacturer, trade name, or vendor catalog number is specified, it is for the purpose of establishing a grade or quality of material only; and the term "or equal" is deemed to follow. It is the bidder's responsibility to identify any alternate items offered in the bid, and prove to the City/County that said item is equal to or better than the product specified. If variations are not stated in the proposal, it will be assumed that the item being bid fully complies with the City/County's specifications.

7. **DEMONSTRATION/SAMPLES** - If requested, the bidders shall, at bidder's expense, demonstrate and/or furnish samples of the exact item(s) proposed within seven (7) calendar days from receipt of such request from the City/County.

8. **DELIVERY** - Each bidder shall state on his proposal form the date upon which he can make delivery of all equipment or merchandise. F.O.B. to the City/County at the location specified by the City/County, with all transportation charges paid.

9. **WARRANTIES, GUARANTEES AND MAINTENANCE** - A copy of the manufacturer's warranties and/or guarantees for the items being bid must accompany your proposal. A copy of your company's maintenance policies and costs must also accompany your proposal. Replacement parts of defective components shall be shipped to the City/County at no cost. If defective parts are required to be returned to the bidder, the shipping costs shall be borne by the bidder.

10. **ACCEPTANCE OF MATERIAL** - The finished materials must be new, the latest make or model, of the best quality, unless otherwise specified, and the highest grade workmanship. The material delivered under this proposal shall remain the property of the bidder until a physical inspection and actual usage of this material and/or service is made, and thereafter is accepted by the City/County. The material delivered must be fully in accord with specification documents. In the event the material and/or services supplied to the City/County is found to be defective or does not conform to specification documents, the City/County reserve the right to cancel the order upon written notice to the bidder and return materials to bidder at the bidder's expense. Successful bidder shall be required to furnish title to the material, free and clear of all liens and encumbrances, issued in the name of the City of Lincoln or Lancaster County, Nebraska, as required by the contract documents or purchase orders. Selling dealer's advertising decals, stickers or other signs shall not be affixed to the equipment; vehicle mud flaps shall be installed blank side out with no advertisements. Manufacturer's standard production forings, stampings, nameplates and logos are acceptable.

11. **BID EVALUATION AND AWARD** - The signed bid shall be considered an offer on the part of the bidder. Such offer shall be deemed accepted upon issuance by the City/County of purchase orders, contract award notifications, or other contract documents appropriate to the work. No bid shall be modified or withdrawn for a period of sixty (60) calendar days after the time and date established for receiving bids, and each bidder so agrees in submitting the bid. In case of a discrepancy between the unit prices and their extensions, the unit price shall govern. The City/County reserve the right to accept or reject any or all bids, or part of bids, to waive irregularities and technicalities, and to request rebids on the material described in the specification documents.

12. **TERMS OF PAYMENT** - Unless other specification provisions state otherwise, payment in full will be made by the City/County within thirty (30) calendar days after all labor has been performed and all equipment or other merchandise has been delivered, and all such labor and equipment and other materials have met all contract specifications.

13. **LAWS** - The Laws of the State of Nebraska shall govern the rights, obligations, and remedies of the Parties under this proposal and any agreement reached as a result of this process.